

Appl. No. 10/021,306
Amdt. dated August 31, 2006
Reply to Office Action of April 5, 2006

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1 Claims 1.-17. (canceled).

1 Claim 18. (currently amended) A method for searching for a desired element
2 found in a first document and in a second document using a predetermined set of stable elements
3 selected from among a set of elements including stable elements and unstable elements, the
4 method comprising:

5 (a) building a first sequence of stable elements from the first document, wherein the first
6 sequence of stable elements represents an ordered list of elements where each element
7 is from the predetermined set of stable elements, wherein the stable elements are
8 derived from the set of elements that include the stable elements and the unstable
9 elements;

10 (b) building a second sequence of stable elements from the second document, wherein the
11 second sequence of stable elements represents an ordered list of elements where each
12 element is from the predetermined set of stable elements;

13 (c) generating one or more search queries from the first sequence of stable elements;

14 (d) searching the second document by comparing the second sequence of elements with the
15 one or more search queries to produce one or more comparison results; and

16 (e) determining the desired element in the second document from the one or more
17 comparison results.

1 Claim 19. (original) The method of claim 18, wherein generating one or more
2 search queries from the first sequence of elements comprises determining a tolerance level and
3 using the tolerance level to determine the one or more search queries.

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1 Claim 20. (original) The method of claim 19, wherein generating one or more
2 search queries from the first sequence of elements comprises building the one or more search
3 queries of a length equal to the tolerance level.

1 Claim 21. (original) The method of claim 20, further comprising:
2 determining a new tolerance level if the desired element cannot be determined from the one
3 or more comparison results; and
4 generating the one or more search queries of a length equal to the new tolerance level.

1 Claim 22. (original) The method of claim 18, further comprising performing at
2 least steps (c), (d), and (e) a plurality of times to determine the desired element.

1 Claim 23. (original) The method of claim 18, wherein determining the desired
2 element from one or more query results comprises determining the desired element from an exact
3 match between a search query and the second sequence of stable elements.

1 Claim 24. (original) The method of claim 18, wherein determining the desired
2 element from one or more query results comprises determining a best match between one or
3 more search queries and the second sequence of stable elements.

1 Claim 25. (original) The method of claim 24, wherein determining the best
2 match between the search query and the second sequence of stable elements comprises counting
3 a number of matches per element for each search query and the second sequence of stable
4 elements.

1 Claim 26. (original) The method of claim 25, wherein determining the best
2 match between the search query and the second sequence of stable elements comprises choosing
3 the search query with a highest number of matches as the best match.

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1 Claim 27. (previously presented) The method of claim 24, wherein each search
2 query is associated with a search query position representing a relative position of the desired
3 element in the search query to the desired element in the related document and wherein
4 determining the best match between the search query and the second sequence of stable elements
5 comprises choosing a search query having a search query position closest to a position of the
6 desired element in the second sequence of stable elements as the best match.

1 Claim 28. (original) The method of claim 18, further comprising constraining a
2 stable element in the predetermined set of stable elements with an attribute associated with the
3 stable element.

1 Claim 29. (original) The method of claim 28, wherein building a first sequence
2 of stable elements comprises searching for the constrained stable element and the attribute
3 associated with the constrained stable element in the first document.

1 Claim 30. (original) The method of claim 28, wherein building a second
2 sequence of stable elements comprises searching for the constrained stable element and the
3 attribute associated with the constrained stable element in the second document.

1 Claim 31. (original) The method of claim 18, further comprising searching for a
2 target desired element based on the target desired element's relationship with the desired
3 element.

1 Claim 32. (original) The method of claim 18, further comprising storing the
2 second sequence of stable elements.

1 Claim 33. (original) The method of claim 18, wherein the first sequence of stable
2 elements is a sequence of characters representing elements in the predetermined set of stable
3 elements.

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1 Claim 34. (original) The method of claim 18, wherein the first and second
2 documents comprise an HTML document.

1 Claim 35. (previously presented) A method for searching for a desired element
2 found in a first document in a second document using a user interface, the method comprising:
3 selecting the desired element in the first document using the user interface;
4 determining a set of stable elements, from among a set of elements including stable elements
5 and unstable elements, based on the selected desired element;
6 building a first sequence of stable elements from the first document, wherein the first
7 sequence of stable elements represents an ordered list of elements where each element
8 is from the set of stable elements;
9 building a second sequence of stable elements from the second document, wherein the
10 second sequence of stable elements represents an ordered list of elements where each
11 element is from the set of stable elements;
12 determining one or more search queries from the first sequence of elements;
13 searching the second document by comparing the second sequence of elements with the one
14 or more search queries to produce one or more comparison results; and
15 determining the desired element in the second document from one or more comparison
16 results.

1 Claim 36. (original) The method of claim 35, wherein determining a set of stable
2 elements comprises using a default set of stable elements.

1 Claim 37. (original) The method of claim 35, wherein determining a set of stable
2 elements comprises choosing elements using the user interface to determine the set of stable
3 elements.

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1 Claim 38. (previously presented) In a computer system that handles documents
2 wherein a first document known to contain a desired element also contains a first plurality of
3 elements ordered into a first sequence of elements, a method of searching for the desired element
4 in a second document expected to be similar to the first document comprising:

5 (a) obtaining an indication of the desired element and its position within the first sequence of
6 elements in the first document;

7 (b) building a second sequence of elements from the second document representing a
8 second plurality of elements found in the second document ordered according to the
9 second sequence of elements, wherein the second sequence of elements are each
10 members of a predetermined set of stable elements selected from among a set of
11 elements including stable elements and unstable elements;

12 (c) generating one or more search queries from stable elements among the first sequence of
13 elements;

14 (d) searching the second sequence of elements of the second document according to the one
15 or more search queries to produce one or more search results; and

16 (e) determining the desired element in the second document from the one or more search
17 results.

1 Claim 39. (previously presented) The method of claim 38, wherein the indication
2 of the desired element includes a position of the desired element within the first sequence of
3 elements and an identification of the desired element from among a set of elements.

1 Claim 40. (previously presented) The method of claim 39, wherein the first and
2 second documents are HTML documents, the set of elements is a set of HTML tags used in
3 documents handled by the computer system, the identification of the desired element is a tag
4 label and the position of the desired element within the first sequence of elements is indicated by
5 ordinal number.

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1 Claim 41. (previously presented) The method of claim 38, wherein searching the
2 second sequence of elements comprises comparing the second sequence of elements with the one
3 or more search queries to produce one or more comparison results and using the comparison
4 results in the step of determining.

1 Claim 42. (previously presented) The method of claim 41, wherein the desired
2 element in the second document is determined from an exact match from among the one or more
3 comparison results.

1 Claim 43. (previously presented) The method of claim 41, wherein the desired
2 element in the second document is determined from a best match from among the one or more
3 comparison results.

1 Claim 44. (previously presented) The method of claim 43, wherein the best
2 match is a comparison result having the highest number of matches between a search query and
3 the second sequence of elements.

1 Claim 45. (previously presented) The method of claim 43, wherein the best
2 match is a comparison result having a position of the desired element in the second document
3 closest to the position of the desired element in the first document.

1 Claim 46. (previously presented) The method of claim 38, wherein generating
2 one or more search queries from the first sequence of elements comprises:
3 determining a tolerance level representable by an integer;
4 building the one or more search queries such that each of the one or more search queries
5 comprises a sequence of elements wherein the number of elements in each sequence is
6 equal to the tolerance level.

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1 Claim 47. (previously presented) The method of claim 46, further comprising:
2 determining if the desired element cannot be found using the one or more search queries
3 each having a number of elements equal to the tolerance level;
4 if the desired element cannot be found, determining a new tolerance level less than the
5 tolerance level; and
6 rebuilding the one or more search queries such that each of the one or more search queries
7 comprises a sequence of elements wherein the number of elements in each sequence is
8 equal to the new tolerance level.

1 Claim 48. (previously presented) The method of claim 38, further comprising
2 performing at least steps (c), (d) and (e) a plurality of times to determine the desired element in
3 the second document.

1 Claim 49. (previously presented) The method of claim 38, wherein elements
2 comprise element types and element attributes such that elements with distinct types and/or
3 distinct attributes are distinctly identified in the first sequence of elements and the second
4 sequence of elements and wherein searching comprises searching for matching element types
5 and matching element attributes.

1 Claim 50. (previously presented) The method of claim 38, wherein the set of
2 elements used for the first sequence of elements and the second sequence of elements comprises
3 stable elements, wherein a stable element is an element that is less likely, relative to an unstable
4 element, to be changed in documents.

1 Claim 51. (new) The method of claim 38, further comprising a process to
2 evaluate relative likelihoods of the set of stable elements producing best results, wherein the
3 process to evaluate relative likelihoods is done using user input for selecting elements.

1 Claim 52. (new) The method of claim 38, further comprising a process to
2 evaluate relative likelihoods of the set of stable elements producing best results, wherein the

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3 process to evaluate relative likelihoods is done by a computer analysis of a plurality of
4 documents.

1 Claim 53. (new) The method of claim 18, further comprising a process to
2 evaluate relative likelihoods of the set of stable elements producing best results, wherein the
3 process to evaluate relative likelihoods is done using user input for selecting elements.

1 Claim 54. (new) The method of claim 18, further comprising a process to
2 evaluate relative likelihoods of the set of stable elements producing best results, wherein the
3 process to evaluate relative likelihoods is done by a computer analysis of a plurality of
4 documents.

1 Claim 55. (new) The method of claim 35, further comprising a process to
2 evaluate relative likelihoods of the set of stable elements producing best results, wherein the
3 process to evaluate relative likelihoods is done by a computer analysis of a plurality of
4 documents.